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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,100	06/23/2003	David Keating	681331-96	7262

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BRIAN M BERLINER, ESQ
O'MELVENY & MYERS, LLP
400 SOUTH HOPE STREET
LOS ANGELES, CA 90071-2899

EXAMINER

CHAMBLISS, ALONZO

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,100

Applicant(s)

KEATING, DAVID

Examiner

Alonzo Chambliss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12,35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-9,11,12,35 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/23/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date: 8/28/06
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 6/20/06 has been fully considered and made of record in the instant application.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4, 6-9, 12, 35, and 37-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 6-9, 12, 35, and 37-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bayan et al. (US 6,348,726).

With respect to Claims 1, 7, and 35, Bayan teaches a plurality of connection bars including at least one permanent connection bar (i.e. any one of 211 or 214) and at least one temporary connection bar 264. A plurality of leads (i.e. additional in Fig. 7a) are located about a periphery of the lead frame substrate of strip 101. A plurality of semiconductor die pads 205 being adapted to receive a semiconductor die 252. A plurality of termination pads (i.e. any one of 228) being electrically linked together and to the semiconductor die pad 205 by at least one of the plurality of connection bars (i.e.

any one of 211 or 214), wherein each one of the plurality of termination pads (i.e. any one of 228) being adapted to receive at a bonding wire 254. The at least one permanent connection bar (i.e. any one of 211 or 214) providing an electrical connection between selected ones of the termination pads (i.e. any one of 228). The at least one temporary connection bar 264 provides temporary structural integrity of the lead frame substrate. A molding compound 250 fixing the semiconductor die pad 205, the plurality of termination pads (i.e. any one of 228), the plurality of connection bars (i.e. any one of 211 or 214), the plurality of leads together, thereby permitting subsequent removal of the at least one temporary connection bar 264 (see col. 2 lines 40-67, col. 3 lines 10-45, and col. 4 lines 7-45; Figs. 2a, 2b, 4, 7a, and 7b).

With respect to Claims 2 and 3, Bayan teaches wherein the semiconductor die pad, the plurality of termination pads, and the plurality of connection bars comprise a thermally and electrically conductive material (i.e. copper) (see col. 1 lines 8-20 and col. 2 lines 46-59).

With respect to Claim 4, Bayan teaches wherein the semiconductor die pad, the plurality of termination pads, and the plurality of connection bars include a top and bottom surface (see Figs. 3-5).

With respect to Claims 6 and 39, Bayan teaches wherein the frame including the a plurality of leads, the plurality of connection bars, the plurality of semiconductor die pads, and the plurality of termination pads have a unitary construction from a common piece of conductive material (see col. 2 lines 46-59; Figs. 3 and 4).

With respect to Claims 8 and 37, Bayan teaches wherein the plurality of connection bars electrically couple the plurality of semiconductor die pads to the plurality of termination pads (see Figs. 2a, 2b, 7a, and 7b).

With respect to Claim 9, Bayan teaches wherein the plurality of connection bars electrically couples selected ones of the plurality of termination pads together (see Figs. 2a, 2b, 7a, and 7b).

With respect to Claims 12 and 38, Bayan teaches wherein the lead frame substrate comprises a substantially uniform thickness (see col. 2 lines 46-59; Figs. 3 and 4).

The prior art made of record and not relied upon is cited primarily to show the product of the instant invention.

Allowable Subject Matter

5. Claims 5, 10, and 11 are allowable over the prior art.

The following is a statement of reason for the indication of allowance subject matter: the prior art of record does not teach or suggest the combination of the molding compound leaves the top and bottom surfaces uncovered.

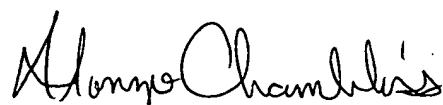
Conclusion

8. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (571) 272-1927.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system see <http://pair-dkect.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC_Support@uspto.gov.

AC/August 28, 2006



Alonzo Chambliss
Primary Patent Examiner
Art Unit 2814